

**DECLARATION AND POWER OF
ATTORNEY FOR PATENT
APPLICATION
(37 CFR 1.63)**

☐ Declaration Submitted with Initial Filing OR ☒ Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16(e)) required)

Attorney Docket Number 42P15449

First Named Inventor Hong Wang

COMPLETE IF KNOWN

Application Number 10/632,431

Filing Date July 31, 2003

Art Unit Not Assigned

Examiner Name Not Assigned

As a below named inventor, I hereby declare that:

My residence, mailing address, and citizenship are as stated below, next to my name.

I believe I am the original and first inventor (if only one name listed below) or an original and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

METHOD AND APPARATUS FOR AFFINITY-GUIDED SPECULATIVE HELPER THREADS IN CHIP MULTIPROCESSORS

(Title of the Invention)

the specification of which

☐ is attached hereto.

OR

☒ was filed on (if applicable):

or 07/31/2003 as United States Application Number 10/632,431

PCT International Application Number

and was amended on (if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above.

I do not know and do not believe that the claimed invention was ever known or used in the United States of America before my invention thereof, or patented or described in any printed publication in any country before my invention thereof or more than one year prior to this application. I do not know and do not believe that the claimed invention was in public use or on sale in the United States of America more than one year prior to this application, nor do I know or believe that the invention has been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months (for a utility patent application) or six months (for a design patent application) prior to this application.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, or inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s):

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

I hereby appoint the persons listed on Appendix A hereto (which is incorporated by reference and a part of this document) as my respective patent attorneys and patent agents, with full power of substitution and revocation, to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected herewith.

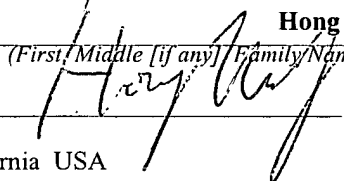
Direct all correspondence to: ☒ Customer Number **08791** or ☐ Correspondence address below

Name			
Blakely, Sokoloff, Taylor & Zafman LLP			
Address			
5285 S.W. Meadows Road, Suite 101			
City	Lake Oswego	State	Oregon
Zip Code	97035		
Country	Telephone (503) 684-6200		Fax (503) 684-3245

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

NAME OF SOLE OR FIRST INVENTOR: ☐ A petition has been filed for this undersigned inventor

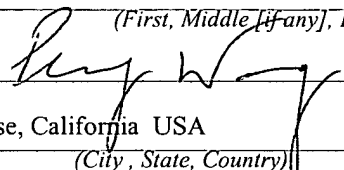
Full Name: Hong Wang
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature  Date Dec 4, 2003

Residence San Jose, California USA Citizenship USA
(City, State, Country) *(Country)*

Mailing Address P.O. Box 10242
San Jose, California 95157 USA

NAME OF SECOND INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Perry H. Wang
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])
Inventor's Signature  Date _____
Residence San Jose, California USA Citizenship USA
(City, State, Country) (Country)
Mailing Address 2907 Kiperash Drive
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NAME OF THIRD INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Jeffery A. Brown
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])
Inventor's Signature _____ Date _____
Residence Bay Point, California USA Citizenship USA
(City, State, Country) (Country)
Mailing Address 755 Azores Circle
Bay Point, California 94565 USA

NAME OF FOURTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Per Hammarlund
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])
Inventor's Signature _____ Date _____
Residence Hillsboro, Oregon USA Citizenship USA
(City, State, Country) (Country)
Mailing Address 2601 NE Second Drive
Hillsboro, Oregon 97124 USA

NAME OF FIFTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: George Z. Chrysos
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])
Inventor's Signature _____ Date _____
Residence Milford, Massachusetts USA Citizenship USA
(City, State, Country) (Country)
Mailing Address 38 Mill Pond Circle
Milford, Massachusetts 01757 USA

NAME OF SIXTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Doron Orenstein
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])
Inventor's Signature _____ Date _____
Residence Haifa, Israel Citizenship Israel
(City, State, Country) (Country)
Mailing Address 12 Igal Alon Street
Haifa, Israel

NAME OF SEVENTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Steve Shih-wei Liao
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])
Inventor's Signature Steve Shih-wei Liao Date Dec 4, 2003
Residence San Jose, California USA Citizenship Taiwan
(City, State, Country) (Country)
Mailing Address 80 Descanso Dr. #3113
San Jose, California 95134 USA

NAME OF EIGHTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

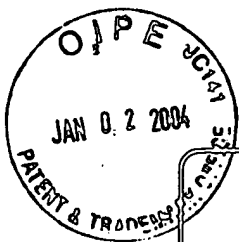
Full Name: John P. Shen
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])
Inventor's Signature John P. Shen Date 12/10/03
Residence San Jose, California USA Citizenship USA
(City, State, Country) (Country)
Mailing Address 2303 Quail Bluff Place
San Jose, California 95121 USA

NAME OF NINTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: _____
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])
Inventor's Signature _____ Date _____
Residence _____ Citizenship _____
(City, State, Country) (Country)
Mailing Address _____

Appendix A

I hereby appoint with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith, BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP, a firm including: William E. Alford, Reg. No. 37,764; Farzad E. Amini, Reg. No. 42,261; W. Thomas Babbitt, Reg. No. 39,591; Jordan M. Becker, Reg. No. 39,602; Michael A. Bernadicou, Reg. No. 35,934; Roger W. Blakely, Jr., Reg. No. 25,831; R. Alan Burnett, Reg. No. 46,149; Gregory D. Caldwell, Reg. No. 39,926; Cory G. Claassen, Reg. No. 50,296; Thomas M. Coester, Reg. No. 39,637; Mimi D. Dao, Reg. No. 45,628; Stephen M. De Klerk, Reg. No. 46,503; Daniel M. De Vos, Reg. No. 37,813; Sanjeet Dutta, Reg. No. 46,145; Tarek N. Fahmi, Reg. No. 41,402; Thomas S. Ferrill, Reg. No. 42,532; George L. Fountain, Reg. No. 36,374; Adam Furst, Reg. No. 51,710; Angelo J. Gaz, Reg. No. 45,907; Andre M. Gibbs, Reg. No. 47,593; James Y. Go, Reg. No. 40,621; Jason R. Graff, Reg. 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Aldous, Reg. No. 31,905; Rob D. Anderson, Reg. No. 33,826; Jay P. Beale, Reg. No. 50,901; Shireen I. Bacon, Reg. No. 40,494; R. Edward Brake, Reg. No. 37,784; Ben Burge, Reg. No. 42,372; Robert H. Chang, Reg. No. 48,765; George Chen, Reg. No. 50,807; Glen B. Choi, Reg. No. 43,546; Kenneth Cool, Reg. No. 40,570; Ted A. Crawford, Reg. No. 50,610; Robert A. Diehl, Reg. No. 40,992; Jeffrey S. Draeger, Reg. No. 41,000; Cynthia Thomas Faatz, Reg. No. 39,973; Christopher Gagne, Reg. No. 36,142; Sharmini N. Green, Reg. No. 41,410; Robert Greenberg, Reg. No. 44,133; Bradley Greenwald, Reg. No. 34,341; Jeffrey B. Huter, Reg. No. 41,086; Seth Z. Kalson, Reg. No. 40,670; Peter Lam, Reg. No. 44,855; Issac Lin, Reg. No. 50,672; David C. Lundmark, Reg. No. 42,815; Anthony Martinez, Reg. No. 44,223; Larry Mennemeier, Reg. No. 51,003; Molly A. McCall, Reg. No. 46,126; Paul Nagy, Reg. No. 37,896; Michael J. Nesheiwat, Reg. No. 47,819; Dennis A. Nicholls, Reg. No. 42,036; Kathy J. Ortiz, Reg. No. 54,351; Lanny Parker, Reg. No. 44,281; Michael D. Plimier, Reg. No. 43,004; Michael Proksch, Reg. No. 43,021; Kevin A. Reif, Reg. No. 36,381; Crystal D. Sayles, Reg. No. 44,318; Russell C. Scott, Reg. No. 43,103; Justin B. Scout, Reg. No. 54,431; Kenneth M. Seddon, Reg. No. 43,105; Mark Seeley, Reg. No. 32,299; Ami P. Shah, Reg. No. 42,143; David Simon, Reg. No. 32,756; Steven P. Skabrat, Reg. No. 36,279; Howard A. Skaist, Reg. No. 36,008; Paul E. Steiner, Reg. No. 41,326; Joni D. Stutman-Horn, Reg. No. 42,173; David Tran, Reg. No. 50,804; John F. Travis, Reg. No. 43,203; Robert G. Winkle, Reg. No. 37,474; Sharon Wong, Reg. No. 37,760; Steven D. Yates, Reg. No. 42,242; Calvin E. Wells, Reg. No. 43,256; Michael Willardson, Reg. No. 50,856 and Charles K. Young, Reg. No. 39,435; my patent attorneys and my patent agents, of INTEL CORPORATION; with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith. with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith.



**DECLARATION AND POWER OF
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APPLICATION
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☐ Declaration Submitted with Initial Filing
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Attorney Docket Number	42P15449
First Named Inventor	Hong Wang
COMPLETE IF KNOWN	
Application Number	10/632,431
Filing Date	July 31, 2003
Art Unit	Not Assigned
Examiner Name	Not Assigned

As a below named inventor, I hereby declare that:

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(Title of the Invention)

the specification of which

☐ is attached hereto.

OR

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or 07/31/2003 as United States Application Number 10/632,431

PCT International Application Number

and was amended on _____ (if applicable)

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Prior Foreign Application(s):

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?
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			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

I hereby appoint the persons listed on Appendix A hereto (which is incorporated by reference and a part of this document) as my respective patent attorneys and patent agents, with full power of substitution and revocation, to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected herewith.

Direct all correspondence to: ☒ Customer Number **08791** or ☐ Correspondence address below

Name			
Address			
City	State	Zip Code	
Country	Telephone (503) 684-6200	Fax	(503) 684-3245

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

NAME OF SOLE OR FIRST INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Hong Wang
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

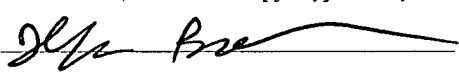
Residence San Jose , California USA Citizenship USA
(City , State, Country) (Country)

Mailing Address P.O. Box 10242
San Jose , California 95157 USA

NAME OF SECOND INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Perry H. Wang
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])
Inventor's Signature _____ Date _____
Residence San Jose, California USA Citizenship USA
(City, State, Country) (Country)
Mailing Address 2907 Kiperash Drive
San Jose, California 95133 USA

NAME OF THIRD INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Jeffery A. Brown
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])
Inventor's Signature  Date 12/20/2003
Residence Bay Point, California USA Citizenship USA
(City, State, Country) (Country)
Mailing Address 755 Azores Circle
Bay Point, California 94565 USA

NAME OF FOURTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Per Hammarlund
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])
Inventor's Signature _____ Date _____
Residence Hillsboro, Oregon USA Citizenship USA
(City, State, Country) (Country)
Mailing Address 2601 NE Second Drive
Hillsboro, Oregon 97124 USA

NAME OF FIFTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: George Z. Chrysos
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])
Inventor's Signature _____ Date _____
Residence _____ Citizenship USA
(City, State, Country) (Country)
Mailing Address _____

NAME OF SIXTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Doron Orenstein
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

Residence Haifa, Israel Citizenship Israel
(City, State, Country) (Country)

Mailing Address 12 Igal Alon Street
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NAME OF SEVENTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Steve Shih-wei Liao
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

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(City, State, Country) (Country)

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NAME OF EIGHTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: John P. Shen
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

Residence San Jose, California USA Citizenship USA
(City, State, Country) (Country)

Mailing Address 2303 Quail Bluff Place
San Jose, California 95121 USA

NAME OF NINTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: _____
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

Residence _____ Citizenship _____
(City, State, Country) (Country)

Mailing Address _____

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No. 52,137; James H. Salter, Reg. No. 35,668; William W. Schaal, Reg. No. 39,018; James C. Scheller, Reg. No. 31,195; Saina S. Shamilov, Reg. No. 48,266; Kevin G. Shao, Reg. No. 45,095; Stanley W. Sokoloff, Reg. No. 25,128; Judith A. Szepesi, Reg. No. 39,393; Edwin H. Taylor, Reg. No. 25,129; Lisa Tom, Reg. No. 52,291; John F. Travis, Reg. No. 43,203; Kerry D. Tweet, Reg. No. 45,959; Mark C. Van Ness, Reg. No. 39,865; Thomas A. Van Zandt, Reg. No. 43,219; Mark R. Vatuone, Reg. No. 53,719; Lester J. Vincent, Reg. No. 31,460; John P. Ward, Reg. No. 40,216; Mark L. Watson, Reg. No. 46,322; Thomas C. Webster, Reg. No. 46,154; Chui-Kiu Teresa Wong, Reg. No. 48,042; and Norman Zafman, Reg. No. 26,250, my patent attorneys, and Brent Vecchia, Reg. No. 48,011 and Lehua Wang, Reg. No. 48,023, my patent agents, with offices located at 12400 Wilshire Boulevard, 7th Floor, Los Angeles, California 90025, telephone (310) 207-3800; and James R. Thein, Reg. No. 31,710, my patent attorney. 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No. 54,351; Lanny Parker, Reg. No. 44,281; Michael D. Plimier, Reg. No. 43,004; Michael Proksch, Reg. No. 43,021; Kevin A. Reif, Reg. No. 36,381; Crystal D. Sayles, Reg. No. 44,318; Justin B. Scout, Reg. No. 54,431; Kenneth M. Seddon, Reg. No. 43,105; Mark Seeley, Reg. No. 32,299; Ami P. Shah, Reg. No. 42,143; David Simon, Reg. No. 32,756; Steven P. Skabrat, Reg. No. 36,279; Howard A. Skaist, Reg. No. 36,008; Paul E. Steiner, Reg. No. 41,326; Joni D. Stutman-Horn, Reg. No. 42,173; David Tran, Reg. No. 50,804; John F. Travis, Reg. No. 43,203; Robert G. Winkle, Reg. No. 37,474; Sharon Wong, Reg. No. 37,760; Steven D. Yates, Reg. No. 42,242; Calvin E. Wells, Reg. No. 43,256; Michael Willardson, Reg. No. 50,856 and Charles K. Young, Reg. No. 39,435; my patent attorneys and my patent agents, of INTEL CORPORATION; with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith. with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith.



**DECLARATION AND POWER OF
ATTORNEY FOR PATENT
APPLICATION
(37 CFR 1.63)**

☐ Declaration Submitted with Initial Filing OR ☒ Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16(e)) required)

Attorney Docket Number 42P15449

First Named Inventor Hong Wang

COMPLETE IF KNOWN

Application Number 10/632,431

Filing Date July 31, 2003

Art Unit Not Assigned

Examiner Name Not Assigned

As a below named inventor, I hereby declare that:

My residence, mailing address, and citizenship are as stated below, next to my name.

I believe I am the original and first inventor (if only one name listed below) or an original and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

METHOD AND APPARATUS FOR AFFINITY-GUIDED SPECULATIVE HELPER THREADS IN CHIP MULTIPROCESSORS

(Title of the Invention)

the specification of which

☐ is attached hereto.

OR

☒ was filed on (if applicable):

or 07/31/2003 as United States Application Number 10/632,431

PCT International Application Number

and was amended on (if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above.

I do not know and do not believe that the claimed invention was ever known or used in the United States of America before my invention thereof, or patented or described in any printed publication in any country before my invention thereof or more than one year prior to this application. I do not know and do not believe that the claimed invention was in public use or on sale in the United States of America more than one year prior to this application, nor do I know or believe that the invention has been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months (for a utility patent application) or six months (for a design patent application) prior to this application.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, or inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s):

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?
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			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
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			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

I hereby appoint the persons listed on Appendix A hereto (which is incorporated by reference and a part of this document) as my respective patent attorneys and patent agents, with full power of substitution and revocation, to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected herewith.

Direct all correspondence to: ☒ Customer Number **08791** or ☐ Correspondence address below

Name		
Address		
City	State	Zip Code
Country	Telephone (503) 684-6200	Fax (503) 684-3245

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

NAME OF SOLE OR FIRST INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: **Hong Wang**
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

Residence **San Jose , California USA** Citizenship **USA**
(City , State, Country) (Country)

Mailing Address **P.O. Box 10242**
San Jose , California 95157 USA

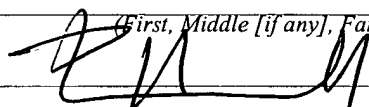
NAME OF SECOND INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Perry H. Wang
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])
Inventor's Signature _____ Date _____
Residence San Jose, California USA Citizenship USA
(City, State, Country) (Country)
Mailing Address 2907 Kiperash Drive
San Jose, California 95133 USA

NAME OF THIRD INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Jeffery A. Brown
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])
Inventor's Signature _____ Date _____
Residence Bay Point, California USA Citizenship USA
(City, State, Country) (Country)
Mailing Address 755 Azores Circle
Bay Point, California 94565 USA

NAME OF FOURTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Per Hammarlund
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])
Inventor's Signature  Date 2003-10-13
Residence Hillsboro, Oregon USA Citizenship ~~USA~~ SWEDEN
(City, State, Country) (Country)
Mailing Address 2601 NE Second Drive
Hillsboro, Oregon 97124 USA

NAME OF FIFTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: George Z. Chrysos
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])
Inventor's Signature _____ Date _____
Residence _____ Citizenship USA
(City, State, Country) (Country)
Mailing Address _____

NAME OF SIXTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Doron Orenstein
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

Residence Haifa, Israel Citizenship Israel
(City, State, Country) *(Country)*

Mailing Address 12 Igal Alon Street
Haifa, Israel

NAME OF SEVENTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Steve Shih-wei Liao
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

Residence San Jose, California USA Citizenship Taiwan
(City, State, Country) *(Country)*

Mailing Address 4892 Moorpark Avenue
San Jose, California 95129 USA

NAME OF EIGHTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: John P. Shen
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

Residence San Jose, California USA Citizenship USA
(City, State, Country) *(Country)*

Mailing Address 2303 Quail Bluff Place
San Jose, California 95121 USA

NAME OF NINTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: _____
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

Residence _____ Citizenship _____
(City, State, Country) *(Country)*

Mailing Address _____

Appendix A

I hereby appoint with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith, BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP, a firm including: Ramin Aghevli, Reg. No. 43,462; William E. Alford, Reg. No. 37,764; Farzad E. Amini, Reg. No. 42,261; W. Thomas Babbitt, Reg. No. 39,591; Jordan M. Becker, Reg. No. 39,602; Michael A. Bernadicou, Reg. No. 35,934; Roger W. Blakely, Jr., Reg. No. 25,831; R. Alan Burnett, Reg. No. 46,149; Gregory D. Caldwell, Reg. No. 39,926; Cory G. Claassen, Reg. No. 50,296; Thomas M. Coester, Reg. No. 39,637; Mimi D. Dao, Reg. No. 45,628; Stephen M. De Klerk, Reg. No. 46,503; Daniel M. De Vos, Reg. No. 37,813; Sanjeet Dutta, Reg. No. 46,145; Tarek N. Fahmi, Reg. No. 41,402; Thomas S. Ferrill, Reg. No. 42,532; George L. Fountain, Reg. No. 36,374; Adam Furst, Reg. No. 51,710; Angelo J. Gaz, Reg. No. 45,907; Andre M. Gibbs, Reg. No. 47,593; James Y. Go, Reg. No. 40,621; Jason R. Graff, Reg. No. 54,134; Jeffery Scott Heilesen, Reg. No. 46,765; James A. Henry, Reg. No. 41,064; Willmore F. Holbrow III, Reg. No. 41,845; Sheryl Sue Holloway, Reg. No. 37,850; George W. Hoover II, Reg. No. 32,992; Eric S. Hyman, Reg. No. 30,139; Aslam A. Jaffery, Reg. No. 51,841; Walter T. Kim, Reg. No. 42,731; Eric T. King, Reg. No. 44,188; Steven Laut, Reg. No. 47,736; Suk S. Lee, Reg. No. 47,745; Gordon R. Lindeen III, Reg. No. 33,192; Jan Carol Little, Reg. No. 41,181; Joseph Lutz, Reg. No. 43,765; Michael J. Mallie, Reg. No. 36,591; Andre L. Marais, Reg. No. 48,095; Raul D. Martinez, Reg. No. 46,904; Paul A. Mendonsa, Reg. No. 42,879; Jonathan S. Miller, Reg. No. 48,534; Heather M. Molleur, Reg. No. 50,432; Richard A. Nakashima, Reg. No. 42,023; Thinh V. Nguyen, Reg. No. 42,034; Robert B. O'Rourke, Reg. No. 46,972; Daniel E. Ovanezian, Reg. No. 41,236; Philip A. Pedigo, Reg. No. 52,107; Marina G. Portnova, Reg. No. 45,750; Joseph A. Pugh, Reg. 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No. 39,435; my patent attorneys and my patent agents, of INTEL CORPORATION; with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith. with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith.



**DECLARATION AND POWER OF
ATTORNEY FOR PATENT
APPLICATION
(37 CFR 1.63)**

☐ Declaration Submitted with Initial Filing **OR** ☒ Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16(e)) required)

Attorney Docket Number 42P15449

First Named Inventor Hong Wang

COMPLETE IF KNOWN

Application Number 10/632,431

Filing Date July 31, 2003

Art Unit Not Assigned

Examiner Name Not Assigned

As a below named inventor, I hereby declare that:

My residence, mailing address, and citizenship are as stated below, next to my name.

I believe I am the original and first inventor (if only one name listed below) or an original and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

METHOD AND APPARATUS FOR AFFINITY-GUIDED SPECULATIVE HELPER THREADS IN CHIP MULTIPROCESSORS

(Title of the Invention)

the specification of which

☐ is attached hereto.

OR

☒ was filed on (if applicable):

or 07/31/2003 as United States Application Number 10/632,431

PCT International Application Number _____

and was amended on _____ (if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above.

I do not know and do not believe that the claimed invention was ever known or used in the United States of America before my invention thereof, or patented or described in any printed publication in any country before my invention thereof or more than one year prior to this application. I do not know and do not believe that the claimed invention was in public use or on sale in the United States of America more than one year prior to this application, nor do I know or believe that the invention has been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months (for a utility patent application) or six months (for a design patent application) prior to this application.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, or inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s):

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

I hereby appoint the persons listed on Appendix A hereto (which is incorporated by reference and a part of this document) as my respective patent attorneys and patent agents, with full power of substitution and revocation, to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected herewith.

Direct all correspondence to: ☒ Customer Number **08791** or ☐ Correspondence address below

Name		
Address		
City	State	Zip Code
Country	Telephone (503) 684-6200	Fax (503) 684-3245

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

NAME OF SOLE OR FIRST INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Hong Wang
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

Residence San Jose , California USA Citizenship USA
(City , State, Country) *(Country)*

Mailing Address P.O. Box 10242
San Jose , California 95157 USA

NAME OF SECOND INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Perry H. Wang
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

Residence San Jose, California USA Citizenship USA
(City, State, Country) (Country)

Mailing Address 2907 Kiperash Drive
San Jose, California 95133 USA

NAME OF THIRD INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Jeffery A. Brown
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

Residence Bay Point, California USA Citizenship USA
(City, State, Country) (Country)

Mailing Address 755 Azores Circle
Bay Point, California 94565 USA

NAME OF FOURTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Per Hammarlund
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

Residence Hillsboro, Oregon USA Citizenship USA
(City, State, Country) (Country)

Mailing Address 2601 NE Second Drive
Hillsboro, Oregon 97124 USA

NAME OF FIFTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: George Z. Chrysos
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature  Date 12/19/2003

Residence Milford, Massachusetts USA Citizenship USA
(City, State, Country) (Country)

Mailing Address 38 Mill Pond Circle
Milford, Massachusetts 01757 USA

NAME OF SIXTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Doron Orenstein
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

Residence Haifa, Israel Citizenship Israel
(City, State, Country) (Country)

Mailing Address 12 Igal Alon Street
Haifa, Israel

NAME OF SEVENTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: Steve Shih-wei Liao
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

Residence San Jose, California USA Citizenship Taiwan
(City, State, Country) (Country)

Mailing Address 4892 Moorpark Avenue
San Jose, California 95129 USA

NAME OF EIGHTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: John P. Shen
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

Residence San Jose, California USA Citizenship USA
(City, State, Country) (Country)

Mailing Address 2303 Quail Bluff Place
San Jose, California 95121 USA

NAME OF NINTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name: _____
(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

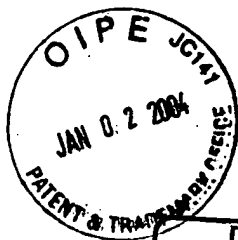
Inventor's Signature _____ Date _____

Residence _____ Citizenship _____
(City, State, Country) (Country)

Mailing Address _____

Appendix A

I hereby appoint with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith, BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP, a firm including: Ramin Aghevli, Reg. No. 43,462; William E. Alford, Reg. No. 37,764; Farzad E. Amini, Reg. No. 42,261; W. Thomas Babbitt, Reg. No. 39,591; Jordan M. Becker, Reg. No. 39,602; Michael A. Bernadicou, Reg. No. 35,934; Roger W. Blakely, Jr., Reg. No. 25,831; R. Alan Burnett, Reg. No. 46,149; Gregory D. Caldwell, Reg. No. 39,926; Cory G. Claassen, Reg. No. 50,296; Thomas M. Coester, Reg. No. 39,637; Mimi D. Dao, Reg. No. 45,628; Stephen M. De Klerk, Reg. No. 46,503; Daniel M. De Vos, Reg. No. 37,813; Sanjeet Dutta, Reg. No. 46,145; Tarek N. Fahmi, Reg. No. 41,402; Thomas S. Ferrill, Reg. No. 42,532; George L. Fountain, Reg. No. 36,374; Adam Furst, Reg. No. 51,710; Angelo J. Gaz, Reg. No. 45,907; Andre M. Gibbs, Reg. No. 47,593; James Y. Go, Reg. No. 40,621; Jason R. Graff, Reg. No. 54,134; Jeffery Scott Heilesen, Reg. No. 46,765; James A. Henry, Reg. No. 41,064; Willmore F. Holbrow III, Reg. No. 41,845; Sheryl Sue Holloway, Reg. No. 37,850; George W. Hoover II, Reg. No. 32,992; Eric S. Hyman, Reg. No. 30,139; Aslam A. Jaffery, Reg. No. 51,841; Walter T. Kim, Reg. No. 42,731; Eric T. King, Reg. No. 44,188; Steven Laut, Reg. No. 47,736; Suk S. Lee, Reg. No. 47,745; Gordon R. Lindeen III, Reg. No. 33,192; Jan Carol Little, Reg. No. 41,181; Joseph Lutz, Reg. No. 43,765; Michael J. Mallie, Reg. No. 36,591; Andre L. Marais, Reg. No. 48,095; Raul D. Martinez, Reg. No. 46,904; Paul A. Mendonsa, Reg. No. 42,879; Jonathan S. Miller, Reg. No. 48,534; Heather M. Molleur, Reg. No. 50,432; Richard A. Nakashima, Reg. No. 42,023; Tinh V. Nguyen, Reg. No. 42,034; Robert B. O'Rourke, Reg. No. 46,972; Daniel E. Ovanezian, Reg. No. 41,236; Philip A. Pedigo, Reg. No. 52,107; Marina G. Portnova, Reg. No. 45,750; Joseph A. Pugh, Reg. 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I also appoint Alan K. Aldous, Reg. No. 31,905; Rob D. Anderson, Reg. No. 33,826; Jay P. Beale, Reg. No. 50,901; Shireen I. Bacon, Reg. No. 40,494; R. Edward Brake, Reg. No. 37,784; Ben Burge, Reg. No. 42,372; Robert H. Chang, Reg. No. 48,765; George Chen, Reg. No. 50,807; Glen B. Choi, Reg. No. 43,546; Kenneth Cool, Reg. No. 40,570; Ted A. Crawford, Reg. No. 50,610; Robert A. Diehl, Reg. No. 40,992; Jeffrey S. Draeger, Reg. No. 41,000; Cynthia Thomas Faatz, Reg. No. 39,973; Christopher Gagne, Reg. No. 36,142; Sharmini N. Green, Reg. No. 41,410; Robert Greenberg, Reg. No. 44,133; Bradley Greenwald, Reg. No. 34,341; Jeffrey B. Huter, Reg. No. 41,086; Seth Z. Kalson, Reg. No. 40,670; Peter Lam, Reg. No. 44,855; Issac Lin, Reg. No. 50,672; David C. Lundmark, Reg. No. 42,815; Anthony Martinez, Reg. No. 44,223; Larry Mennemeier, Reg. No. 51,003; Paul Nagy, Reg. No. 37,896; Michael J. Nesheiwat, Reg. No. 47,819; Dennis A. Nicholls, Reg. No. 42,036; Kathy J. Ortiz, Reg. 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No. 39,435; my patent attorneys and my patent agents, of INTEL CORPORATION; with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith. with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith.



DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION (37 CFR 1.63)

--- Declaration
Submitted
with Initial
Filing

OR

☒ Declaration
Submitted after Initial
Filing (surcharge
(37 CFR 1.16(e))
required)

Attorney Docket Number 42P15449

First Named Inventor Hong Wang

COMPLETE IF KNOWN

Application Number 10/632,431

Filing Date July 31, 2003

Art Unit Not Assigned

Examiner Name Not Assigned

As a below named inventor, I hereby declare that:

My residence, mailing address, and citizenship are as stated below, next to my name.

I believe I am the original and first inventor (if only one name listed below) or an original and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

METHOD AND APPARATUS FOR AFFINITY-GUIDED SPECULATIVE HELPER THREADS IN CHIP MULTIPROCESSORS

(Title of the Invention)

the specification of which

☐ is attached hereto.

OR

☒ was filed on (if applicable):

or 07/31/2003

and was amended on

as United States Application Number
PCT International Application Number

10/632,431

(if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above.

I do not know and do not believe that the claimed invention was ever known or used in the United States of America before my invention thereof, or patented or described in any printed publication in any country before my invention thereof or more than one year prior to this application. I do not know and do not believe that the claimed invention was in public use or on sale in the United States of America more than one year prior to this application, nor do I know or believe that the invention has been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months (for a utility patent application) or six months (for a design patent application) prior to this application.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, or inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s):

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

I hereby appoint the persons listed on Appendix A hereto (which is incorporated by reference and a part of this document) as my respective patent attorneys and patent agents, with full power of substitution and revocation, to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected herewith.

Direct all correspondence to: ☒ Customer Number **08791** or ☐ Correspondence address below

Name Blakely, Sokoloff, Taylor & Zafman LLP			
Address 5285 S.W. Meadows Road, Suite 101			
City Lake Oswego	State Oregon	Zip Code 97035	
Country	Telephone (503) 684-6200	Fax (503) 684-3245	

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

NAME OF SOLE OR FIRST INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name:

Hong Wang

(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature

Date

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Full Name:

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Date

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NAME OF THIRD INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name:

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Inventor's Signature

Date

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Full Name:

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Inventor's Signature

Date

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NAME OF FIFTH INVENTOR: ☐ A petition has been filed for this undersigned inventor

Full Name:

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Inventor's Signature

Date

Residence **Milford, Massachusetts USA**

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Citizenship **USA**

(Country)

Mailing Address **38 Mill Pond Circle**

Milford, Massachusetts 01757 USA

Docket No. 42P15449

NAME OF SIXTH INVENTOR:

☐ A petition has been filed for this undersigned inventor

Full Name:

Doron Orenstein*(First, Middle [if any], Family Name (or Surname), and Suffix [if any])*

Inventor's Signature

[Signature]

Date

2-DEC-03

Residence

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Citizenship

Israel*(Country)*

Mailing Address

12 Igal Alon StreetHaifa, Israel

NAME OF SEVENTH INVENTOR:

☐ A petition has been filed for this undersigned inventor

Full Name:

Steve Shih-wei Liao*(First, Middle [if any], Family Name (or Surname), and Suffix [if any])*

Inventor's Signature

Date

Residence

San Jose, California USA*(City, State, Country)*

Citizenship

Taiwan*(Country)*

Mailing Address

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NAME OF EIGHTH INVENTOR:

☐ A petition has been filed for this undersigned inventor

Full Name:

John P. Shen*(First, Middle [if any], Family Name (or Surname), and Suffix [if any])*

Inventor's Signature

Date

Residence

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Citizenship

USA*(Country)*

Mailing Address

2303 Quail Bluff PlaceSan Jose, California 95121 USA

NAME OF NINTH INVENTOR:

☐ A petition has been filed for this undersigned inventor

Full Name:

(First, Middle [if any], Family Name (or Surname), and Suffix [if any])

Inventor's Signature

Date

Residence

(City, State, Country)

Citizenship

(Country)

Mailing Address

PLEASE

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